



CALIFORNIA DEPARTMENT OF CONSERVATION CALIFORNIA GEOLOGICAL SURVEY

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SPECIAL PUBLICATION 117A (REVISED) RELEASE

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Guidelines for Evaluating and Mitigating Seismic Hazards in California

This publication contains several important revisions to the 1997 edition of Special Publication 117, "Guidelines for Evaluating and Mitigating Seismic Hazards in California", and supersedes that version. This release also supersedes a previous 2008 update of Special Publication 117 that was released electronically in portable document format. Changes in ground motion requirements for foundation design, and, for assessments of liquefaction and slope stability hazards in the latest edition of the California Building Code, have necessitated additional changes for consistency. To avoid confusion with the previous 2008 release, this document carries the designation "Special Publication 117A."

More than ten years have passed since these Guidelines were first published, during which time there have been significant changes in practice as a result of continuing research in geotechnical earthquake engineering and soil mechanics, and from investigations of several significant earthquakes such as the 1999 Chi-Chi Earthquake in Taiwan and the 1999 Kocaeli Earthquake in Turkey. This has prompted the need to revise these Guidelines in several areas.

New tools for the screening and evaluation of slope stability and liquefaction hazards have been developed, and new and improved attenuation relations for the estimation of future ground motions have emerged from analysis of numerous new near-field strong motion recordings of recent large earthquakes. These advancements are already finding their way from the professional literature into practice, and the revised Special Publication 117A includes references to them. In addition, mitigation of ground failure hazards has been consolidated into a new chapter that includes the role of grading in hazard mitigation. These changes will improve the utility of these Guidelines in the evaluation of seismic hazards for proposed development within California's regulatory "zones of required investigation" pursuant to the Seismic Hazards Mapping Act of 1990.

Special Publication 117A (Revised) is available for reference at the California Geological Survey offices in Sacramento, Menlo Park, and Los Angeles.

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